REMARKS

This supplemental reply is being filed to supersede and replace the amendment in reply filed on 30 June 2008, which should be disregarded.

Claims 1-4 are pending in this application, with claims 1, 2 and 4 being independent. Independent claims 1, 2 and 4 have been amended. No new matter has been added by way of these amendments. The Applicants also appreciate the Examiner for taking time out of his schedule to discuss the pending claims, some proposed claims amendments and this action with Mr. Jeffrey J. Barclay (Reg. No. 48,950), representative of the Applicants, on June 24 and 26, 2008. Favorable reconsideration of the action is respectfully requested in view of the foregoing amendments and following comments of the Applicants, which are preceded by related comments of the Examiner in small bold type:

***Claim Rejections - 35 USC* 8 103**

6. Claims 1 - 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris (Mark j. Harris et al., "Physically-Based Visual Simulation on Graphics Hardware", September 2002, Proceedings of the ACM SIGGRAPH/EUROGRAPHICS Conference on Graphics Hardware, pages 109 - 118 and 160) in view of Gamito (Manuel gamito et al., "Two-dimensional simulation of gaseous phenomena using vortex particles", 1995, Computer Animation and Simulation '95, Springer-Verlag, 14 unnumbered pages).

Amended independent claim 1 is directed to a method of simulating advection of a plurality of elements through space. The method includes generating a plurality of 2D grids, with a computer, in which each 2D grid is independent and has a plurality of grid points. Movement information is associated with each 2D grid point and the movement information changes over a time period that includes discrete intervals. A region of 3D space is defined using the 2D grids by associating a component with each 2D grid point to form a respective 3D vector. Each component includes one of a rotational portion and a linear portion. The region of 3D space is also defined by adding at least one pseudo-random 3D vector to each respective 3D vector to form one of a symmetric 3D vector and a non-symmetric 3D vector.

The method also includes advecting the plurality of elements through the region of 3D space using the movement information associated with the 2D grids. The method also includes displaying the simulated advection of the plurality of elements.

Referring to the subject action, the Examiner appears to concede that Harris does not specifically teach each feature of independent claim 1. In particular, the Examiner appears to concede that Harris is not understood to teach "advecting the plurality of elements through the region of 3D space using the movement information associated with the 2D grids." As such, the Applicants submit that the reference is silent regarding advecting the plurality of elements through the region of 3D space using the movement information associated with the 2D grids, as recited from amended independent claim 1. Additionally, the Applicants submit that the reference is silent in regards to defining a region of 3D space by adding a pseudo-random 3D vector to each respective 3D vector, also recited from amended independent claim 1.

Gamito is not understood to remedy the forgoing deficiencies of Harris. For example, Gamito is not understood to describe or suggest defining a region of 3D space by adding a pseudo-random 3D vector to each respective 3D vector. Rather, Gamito describes an two-dimension algorithm for animating and visualizing turbulent gaseous fluids. In this regard, particular, Gamito reads:

> This article presents a simple, fast and stable method for the animation and visualization of turbulent gaseous fluids in two dimensions. We draw on well known methods from computational fluid dynamics to model the fluid using vorticity and velocity fields...(Abstract)

Thus, while Harris provides a method for visualizing gaseous fluids in two dimensions, the reference is not understood to disclose or suggest defining a region of 3D space by adding a pseudo-random 3D vector to each respective 3D vector, as required by amended independent claim 1. For at least this reason, amended independent claim 1 is believed to be patentable. Amended independent claims 2 and 4 include limitations that are similar to those described above with respect to claim 1. As such, amended independent claims 2 and 4 are also believed to be allowable for at least the same reasons noted above.

The dependent claim 3 partakes of the novelty of it's parent claim and, although it is believed that the dependent claim defines a separate patentable feature, for this reason the dependent claim is not discussed here in detail.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or

concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

In view of the foregoing remarks, the entire application is now believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicants' undersigned attorney can be reached at the address shown below. All telephone calls should be directed to the undersigned at 617-368-2191.

No fees are believed due at this time. Please apply any charges or credits to deposit account 06-1050, referencing Attorney Docket No. 20567-023001.

Respectfully submitted,

Date: 3 July 2008

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